

IN THE CLAIMS

1. (currently amended) A stent for delivering a therapeutic substance ~~in a body vessel~~, comprising:
a stent body having depots on a surface of the stent body; ~~the stent body carrying:~~
a first material including a therapeutic substance; and
a second material configured to convert a first type of energy received by the second material from an energy source to a second type of energy, wherein the second type of energy promotes release of the therapeutic substance from the first material, ~~and~~ wherein the second material is in the depots of the stent body and wherein the second material is disposed over a surface of the depots.
2. (original) The stent of Claim 1, wherein the second material is selected from the group consisting of Au, Au-alloy, Au with a silica core, and ferrimagnetic glass-ceramic.
3. (original) The stent of Claim 1, wherein the second type of energy is thermal energy.
4. (canceled)
5. (original) The stent of Claim 1, further comprising a topcoat deposited over at least a portion of the first material.
6. (original) The stent of Claim 1, wherein the second material comprises Au particles having a silica nanoparticle core.
7. (previously presented) A stent for delivering a therapeutic substance in a body vessel, comprising a stent body having depots on a surface of the stent body, the stent body carrying:
a first material including a therapeutic substance;

a second material configured to convert a first type of energy received by the second material from an energy source to a second type of energy, wherein the second type of energy promotes release of the therapeutic substance from the first material, and wherein the second material is in the depots of the stent body; and

a third material configured to convert a third type of energy received by the third material from an energy source to a fourth type of energy, wherein the fourth type of energy promotes release of the therapeutic substance from the stent body.

8. (previously presented) The stent of Claim 7, wherein the first type of energy and the third type of energy are electromagnetic energy, and wherein the electromagnetic energy of the first energy type has a different wavelength than the third energy type.

9. (canceled)

10. (previously presented) The stent of Claim 1, wherein the second material is capable of converting electromagnetic waves with wavelengths between 800 and 1200 nm into thermal energy.

11. (currently amended) The stent of Claim 1, wherein the first material is includes a temperature-sensitive hydrogel.

12. (original) The stent of Claim 11, wherein the temperature-sensitive hydrogel is in thermal communication with the second material.

13. (original) The stent of Claim 11, wherein the temperature-sensitive hydrogel is selected from the group consisting of N-isopropylacrylamide, polyoxyethylene-polyoxypropylene block copolymers, poly(acrylic acid) grafted pluronic copolymers, chitosan grafted pluronic copolymer, elastin mimetic polypeptides, and combinations and mixtures thereof.

14.-28. (canceled)

29. (previously presented) The stent of Claim 6, wherein the silica nanoparticle core has a diameter from 100 to 250 nm.

30. (previously presented) The stent of Claim 6, wherein the Au particles include an Au shell having a thickness of 1 to 100 nm.

31. (previously presented) The stent of Claim 11, wherein the temperature-sensitive hydrogel has a lower critical solution temperature greater than 37°C.

32. (previously presented) The stent of Claim 11, wherein the temperature-sensitive hydrogel is an anionic hydrogel and the therapeutic substance is a cationic substance.

Claims 33.-44. (canceled)

45. (currently amended) A stent for delivering a therapeutic substance in a body vessel, comprising:

a radially expandable stent body;

a first material including a therapeutic substance; and

a second material configured to convert non-cytotoxic electromagnetic waves received by the second material to a first type of energy, wherein the first type of energy promotes the release of the therapeutic substance from the first material, wherein the stent body includes cavities and wherein the second material is deposited in the cavities of the stent body and over the surface of the cavities.

46. (previously presented) The stent of Claim 45, wherein the second material is capable of converting electromagnetic waves with wavelengths between 800 and 1200 nm into thermal energy.

47. (previously presented) The stent of Claim 45, wherein the second material is selected from the group consisting of Au, Au-alloy, Au with a silica core, and ferrimagnetic glass-ceramic.

48. (previously presented) The stent of Claim 45, wherein the first type of energy is thermal energy.

49. (canceled)

50. (previously presented) The stent of Claim 45, further comprising a topcoat deposited over at least a portion of the first material.

51. (previously presented) The stent of Claim 45, wherein the second material comprises Au particles having a silica nanoparticle core.

52. (previously presented) The stent of Claim 51, wherein the silica nanoparticle core has a diameter from 100 to 250 nm.

53. (previously presented) The stent of Claim 51, wherein the Au particles include an Au shell having a thickness of 1 to 100 nm.

54. (previously presented) A stent for delivering a therapeutic substance in a body vessel, comprising:

a radially expandable stent body;

a first material including a therapeutic substance;

a second material configured to convert non-cytotoxic electromagnetic waves received by the second material to a first type of energy, wherein the first type of energy promotes the release of the therapeutic substance from the first material, wherein the stent body includes cavities and wherein the second material is deposited in the cavities of the stent body; and

a third material configured to convert a second type of energy received by the third material to a third type of energy, wherein the third type of energy promotes release of the therapeutic substance from the stent body.

55. (previously presented) The stent of Claim 54, wherein the second type of energy is electromagnetic energy, and wherein the electromagnetic waves received by the second material have a different wavelength than the second energy type.

56. (currently amended) The stent of Claim 45, wherein the first material is includes a temperature-sensitive hydrogel.

57. (previously presented) The stent of Claim 56, wherein the temperature-sensitive hydrogel is in thermal communication with the second material.

58. (previously presented) The stent of Claim 56, wherein the temperature-sensitive hydrogel is selected from the group consisting of N-isopropylacrylamide, polyoxyethylene-polyoxypropylene block copolymers, poly(acrylic acid) grafted pluronic copolymers, chitosan grafted pluronic copolymer, elastin mimetic polypeptides, and combinations and mixtures thereof.

59. (previously presented) The stent of Claim 56, wherein the temperature-sensitive hydrogel has a lower critical solution temperature greater than 37°C.

60. (previously presented) The stent of Claim 56, wherein the temperature-sensitive hydrogel is an anionic hydrogel and the therapeutic substance is a cationic substance.

61. (previously presented) The stent of Claim 1, wherein the second material is ferrimagnetic glass-ceramic.

62. (previously presented) A stent for delivering a therapeutic substance in a body vessel, comprising a stent body having depots on a surface of the stent body, the stent body carrying:

a first material including a therapeutic substance;

a second material configured to convert a first type of energy received by the second material from an energy source to a second type of energy, wherein the second type of energy promotes release of the therapeutic substance from the first material, and wherein the second material is in the depots of the stent body; and

a second therapeutic substance and a third material configured to convert a third type of energy received by the third material from an energy source to a fourth type of energy, wherein the fourth type of energy promotes release of the second therapeutic substance from the stent body.

63. (previously presented) The stent of Claim 62, wherein the first type of energy and the third type of energy are electromagnetic energy, and wherein the electromagnetic energy of the first energy type has a different wavelength than the third energy type.

64. (previously presented) The stent of Claim 62, wherein the second therapeutic substance is included in the first material or in a fourth material carried by the stent body.

65. (previously presented) The stent of Claim 1, wherein the second material completely fills at least some of the depots.

66. (previously presented) The stent of Claim 5, wherein the topcoat includes a polymer.

67. (previously presented) The stent of Claim 45, wherein the second material is ferrimagnetic glass-ceramic.

68. (previously presented) A stent for delivering a therapeutic substance in a body vessel, comprising:

a radially expandable stent body;

a first material including a therapeutic substance;

a second material configured to convert non-cytotoxic electromagnetic waves received by the second material to a first type of energy, wherein the first type of energy promotes the release of the therapeutic substance from the first material, wherein the stent body includes cavities and wherein the second material is deposited in the cavities of the stent body; and

a second therapeutic substance and a third material configured to convert a second type of energy received by the third material to a third type of energy, wherein the third type of energy promotes release of the second therapeutic substance from the stent body.

69. (previously presented) The stent of Claim 68, wherein the second type of energy is electromagnetic energy and wherein the electromagnetic waves received by the second material have a different wavelength than the second type of energy.

70. (previously presented) The stent of Claim 68, wherein the second therapeutic substance is included in the first material or in a fourth material carried by the stent body.

71. (previously presented) The stent of Claim 45, wherein the second material completely fills at least some of the depots.

72. (previously presented) The stent of Claim 50, wherein the topcoat includes a polymer.

73. (new) A stent for delivering a therapeutic substance, comprising:

a stent body having depots on a surface of the stent body;

a first material including a therapeutic substance; and

a second material configured to convert a first type of energy received by the second material from an energy source to a second type of energy, wherein the second type of energy promotes release of the therapeutic substance from the first material, and wherein the second material is in the depots of the stent body and the second material is different than surface material of the depots.

74. (new) The stent of Claim 73, wherein the second material is selected from the group consisting of Au, Au-alloy, Au with a silica core, and ferrimagnetic glass-ceramic.

75. (new) The stent of Claim 73, wherein the second type of energy is thermal energy.

76. (new) The stent of Claim 73, further comprising a coating deposited over at least a portion of the first material.

77. (new) The stent of Claim 73, wherein the second material comprises Au particles having a silica nanoparticle core.

78. (new) The stent of Claim 77, wherein the silica nanoparticle core has a diameter from 100 to 250 nm.

79. (new) The stent of Claim 77, wherein the Au particles include an Au shell having a thickness of 1 to 100 nm.

80. (new) The stent of Claim 73, wherein the second material is capable of converting electromagnetic waves with wavelengths between 800 and 1200 nm into thermal energy.

81. (new) The stent of Claim 73, wherein the first material includes a temperature-sensitive hydrogel.

82. (new) The stent of Claim 81, wherein the temperature-sensitive hydrogel is in thermal communication with the second material.

83. (new) The stent of Claim 81, wherein the temperature-sensitive hydrogel is selected from the group consisting of N-isopropylacrylamide, polyoxyethylene-polyoxypropylene block copolymers, poly(acrylic acid) grafted pluronic copolymers, chitosan grafted pluronic copolymer, elastin mimetic polypeptides, and combinations and mixtures thereof.

84. (new) The stent of Claim 73, wherein the depots are at least partially filled with the second material.